CLAIMS:

1. A method of determining a position of an external transceiver relative to an implanted transceiver, the method comprising the steps of:

measuring the strength of a magnetic field proximal to the external transceiver; and

determining a position of the external transceiver relative to the implanted transceiver from said measured magnetic field strength.

2. A method according to claim 1 wherein the step of determining further comprises comparing a measured strength of magnetic field proximal to the external transceiver to a threshold value.

3. A method according to claim 2 further comprising the step of indicating that the external transceiver has been displaced when the measured strength of magnetic field proximal to the external transceiver exceeds the threshold value.

4. A method according to claim 3 wherein the step of indicating comprises providing an audible indication such as an alarm, a visible indication or other indication.

5. A method according to any one of claims 1 to 4 wherein the step of determining further comprises mapping a measured value of magnetic field strength proximal to the external transceiver to a distance value.

6. A method according to claim 5 wherein the step of mapping comprises consulting a look-up table comprising a plurality of pairs of values, each pair of values mapping a particular magnetic field strength to a corresponding transceiver separation distance.

7. A method according to claim 5 wherein the step of mapping comprises algorithmically converting said measured value of magnetic field into a corresponding transceiver separation distance..

8. A method according to any one of claims 1 to 7 further comprising the step of providing a transcutaneous link between the external transceiver and the implanted

transceiver, the link being bidirectional such that the external transceiver and the implanted transceiver transmit and receive signals across the transcutaneous link.

9. A method according to claim 8 further comprising the step of transmitting power and data signals from the external transceiver to the implanted transceiver across the transcutaneous link.

10. A method according to claim 8 or claim 9 further comprising the step of transmitting data signals from the implanted transceiver to the external transceiver across the transcutaneous link.

11. A method according to any one of claims 1 to 7 further comprising the step of providing a transcutaneous link between the external transceiver and the implanted transceiver, the link being unidirectional such that the external transceiver, comprising a transmitter, transmits signals to the implanted transceiver, comprising a receiver, across the transcutaneous link.

12. A method according to claim 11 wherein the signals transmitted by the transmitter are power and data signals.

13. A method according to any one of claims 1 to 12 wherein the step of measuring comprises positioning a pick-up coil proximal to the external transceiver such that a voltage induced on the pick-up coil is indicative of a magnetic field proximal to the external transceiver.

14. A method according to claim 13 further comprising the step of positioning the pick-up coil in a plane substantially perpendicular to a primary axis of the magnetic field produced between the external receiver and the implanted receiver.

15. A method according to claim 14 wherein the pick-up coil comprises an open-circuited single turn positioned concentrically with turns of the external receiver.

16. Apparatus for determining a position of an external transceiver relative to an implanted transceiver, the apparatus comprising:

means for measuring the strength of a magnetic field proximal to the external transceiver; and

means for determining a position of the external transceiver relative to the implanted transceiver from said measured magnetic field strength.

17. Apparatus according to claim 16 further comprising means for comparing a measured strength of magnetic field proximal to the external transceiver to a threshold value.

18. Apparatus according to claim 17 further comprising means for indicating that the external transceiver has been displaced when the measured strength of magnetic field proximal to the external transceiver exceeds the threshold value.

19. Apparatus according to claim 18 wherein the means for indicating comprises any one of an audible alarm, a visible indicator or other type of indicator.

20. Apparatus according to any one of claims 16 to 19 further comprising means for mapping a measured value of magnetic field strength proximal to the external transceiver to a distance value.

21. Apparatus according to claim 20 wherein the means for mapping comprises a look-up table comprising a plurality of pairs of values of magnetic field strength to transceiver separation distance.

22. Apparatus according to claim 20 wherein the means for mapping comprises means for algorithmically converting said measured value of magnetic field into a corresponding transceiver separation distance..

23. Apparatus according to any one of claims 16 to 22 further comprising a transcutaneous link provided by the external transceiver and the implanted transceiver.

24. Apparatus according to claim 23 wherein the transcutaneous link comprises an RF link.

25. Apparatus according to claim 23 or claim 24 wherein the transcutaneous link is bidirectional such that the external transceiver and the implanted transceiver transmit and receive signals across the transcutaneous link.

26. Apparatus according to claim 25 wherein power and data signals are transmitted from the external transceiver to the implanted transceiver across the transcutaneous link.

27. Apparatus according to claim 25 or claim 26 wherein data signals are transmitted from the implanted transceiver to the external transceiver across the transcutaneous link.

28. Apparatus according to claim 23 wherein the transcutaneous link is unidirectional, the external transceiver comprises a transmitter and the implanted transceiver comprises a receiver, such that the transmitter transmits signals to the receiver across the transcutaneous link.

29. Apparatus according to claim 28 wherein the signals transmitted by the transmitter are power and data signals.

30. Apparatus according to any one of claims 16 to 29 wherein the means for measuring the strength of the magnetic field proximal to the external transceiver comprises a pickup coil positioned proximal to the external transceiver, such that a voltage induced on the pickup coil is indicative of a magnetic field proximal to the external transceiver.

31. Apparatus according to claim 30 wherein the pickup coil is positioned in a plane substantially perpendicular to a primary axis of the magnetic field produced by the transceivers.

32. Apparatus according to claim 31 wherein the pickup coil comprises an open circuited single turn positioned concentrically with turns of the external transceiver.

33. Apparatus according to any one of claims 30 to 32 wherein an output of the pick-up coil is passed through a peak detector means.

34. A method of determining a skin flap thickness of a recipient of a prosthesis comprising a transcutaneous link provided by an external transceiver and an implanted transceiver, the method comprising the steps of:

measuring a strength of a magnetic field proximal to the external transceiver when the external transceiver is positioned so as to implement the transcutaneous link; and

determining a skin flap thickness of the recipient by determining a position of the external transceiver relative to the implanted receiver from said measured magnetic field strength.

35. A method according to claim 34 wherein the transcutaneous link is bidirectional such that the external transceiver and the implanted transceiver transmit and receive signals across the transcutaneous link.

36. A method according to claim 35 wherein power and data signals are transmitted from the external transceiver to the implanted transceiver across the transcutaneous link.

37. A method according to claim 35 or claim 36 wherein data signals are transmitted from the implanted transceiver to the external transceiver across the transcutaneous link.

38. A method according to claim 34 wherein the transcutaneous link is unidirectional such that the external transceiver, comprising a transmitter, transmits signals to the implanted transceiver, comprising a receiver, across the transcutaneous link.

39. A method according to claim 38 wherein the signals transmitted by the transmitter are power and data signals.

40. A method according to any one of claims 34 to 39 wherein the step of measuring comprises positioning a pick-up coil proximal to the external transceiver such that a voltage induced on the pick-up coil is indicative of a magnetic field proximal to the external transceiver.

41. A method according to claim 40 further comprising the step of positioning the pick-up coil in a plane substantially perpendicular to a primary axis of the magnetic field produced between the external receiver and the implanted receiver.

42. A method according to claim 41 wherein the pick-up coil comprises an open-circuited single turn positioned concentrically with turns of the external receiver.

43. Apparatus for determining a skin flap thickness of a recipient of a prosthesis comprising a transcutaneous link provided by an external transceiver and an implanted transceiver, the apparatus comprising:

means for measuring a strength of a magnetic field proximal to the external transceiver when the external transceiver is positioned so as to implement the transcutaneous link; and

means for determining a skin flap thickness of the recipient by determining a position of the external transceiver relative to the implanted receiver from said measured magnetic field strength.

44. Apparatus according to claim 43 wherein the transcutaneous link comprises an RF link.

45. Apparatus according to claim 43 or claim 44 wherein the transcutaneous link is bidirectional such that the external transceiver and the implanted transceiver transmit and receive signals across the transcutaneous link.

46. Apparatus according to claim 45 wherein power and data signals are transmitted from the external transceiver to the implanted transceiver across the transcutaneous link.

47. Apparatus according to claim 45 or claim 46 wherein data signals are transmitted from the implanted transceiver to the external transceiver across the transcutaneous link.

48. Apparatus according to claim 43 wherein the transcutaneous link is unidirectional, the external transceiver comprises a transmitter and the implanted transceiver comprises a receiver, such that the transmitter transmits signals to the receiver across the transcutaneous link.

49. Apparatus according to claim 48 wherein the signals transmitted by the transmitter are power and data signals.

50. Apparatus according to any one of claims 43 to 49 wherein the means for measuring the strength of the magnetic field proximal to the external transceiver comprises a pickup coil positioned proximal to the external transceiver, such that a voltage induced on the pickup coil is indicative of a magnetic field proximal to the external transceiver.

51. Apparatus according to claim 50 wherein the pickup coil is positioned in a plane substantially perpendicular to a primary axis of the magnetic field produced by the transceivers.

52. Apparatus according to claim 51 wherein the pickup coil comprises an open circuited single turn positioned concentrically with turns of the external transceiver.

53. Apparatus according to claim 52 wherein an output of the pick-up coil is passed through a peak detector means.

54. A skin-flap thickness meter, the meter comprising:

a meter transmitter coil for placement proximal to an implanted transceiver such that the meter transmitter coil and the implanted transceiver coil are separated by substantially the skin-flap thickness;

means for measuring a strength of a magnetic field proximal to the meter transmitter coil when the meter transmitter coil is placed proximal to the implanted transceiver; and

means for determining a skin flap thickness by determining a position of the meter transmitter coil relative to the implanted transceiver from said measured magnetic field strength.

55. A skin-flap thickness meter according to claim 54 wherein the meter transmitter coil contains a pick-up coil and peak detector means.

56. A skin-flap thickness meter according to claim 55 wherein the peak detector means has a DC output that is measured using an analogue to digital converter.

57. A skin-flap thickness meter according to claim 56 wherein the output of the analogue to digital converter is converted into a skin-flap thickness and displayed on a display means of the meter.

58. Apparatus for determining a position of an external transceiver relative to an implanted transceiver, the apparatus comprising:

means for measuring the strength of a magnetic field proximal to the external transceiver;

means for determining a position of the external transceiver relative to the implanted transceiver from said measured magnetic field strength;

means for comparing a measured strength of magnetic field proximal to the external transceiver to a threshold value;

means for indicating that the external transceiver has been displaced when the measured strength of magnetic field proximal to the external transceiver exceeds the threshold value; and

means for mapping comprises a look-up table comprising a plurality of pairs of values of magnetic field strength to transceiver separation distance.

59. Apparatus for determining a skin flap thickness of a recipient of a prosthesis comprising a transcutaneous link provided by an external transceiver and an implanted transceiver, the apparatus comprising:

a pick-up coil for measuring a strength of a magnetic field proximal to the external transceiver when the external transceiver is positioned so as to implement the transcutaneous link, the pickup coil being positioned in a plane substantially perpendicular to a primary axis of the magnetic field produced by the transceivers;

wherein a voltage induced on the pickup coil is indicative of a magnetic field proximal to the external transceiver; and

means for determining a skin flap thickness of the recipient by determining a position of the external transceiver relative to the implanted receiver from said measured magnetic field strength.